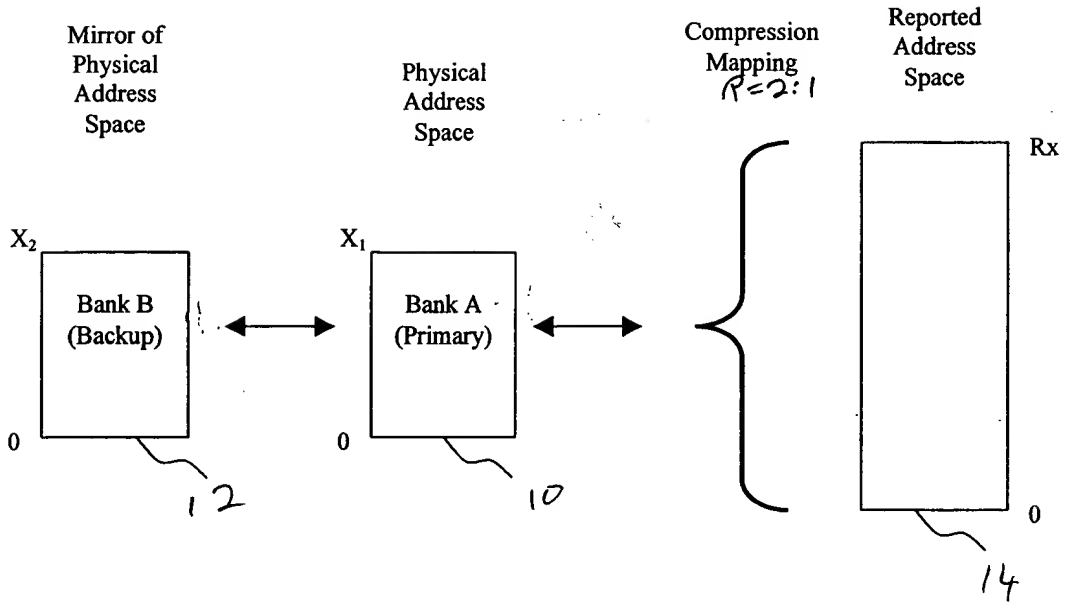
Mirror of Physical Address Space
Physical Address Space
Compression Mapping
R=2:1
Reported Address Space
X2
Bank B (Backup)
0
12
X1
Bank A (Primary)
0
10
Rx
0
14

FIG. 1A

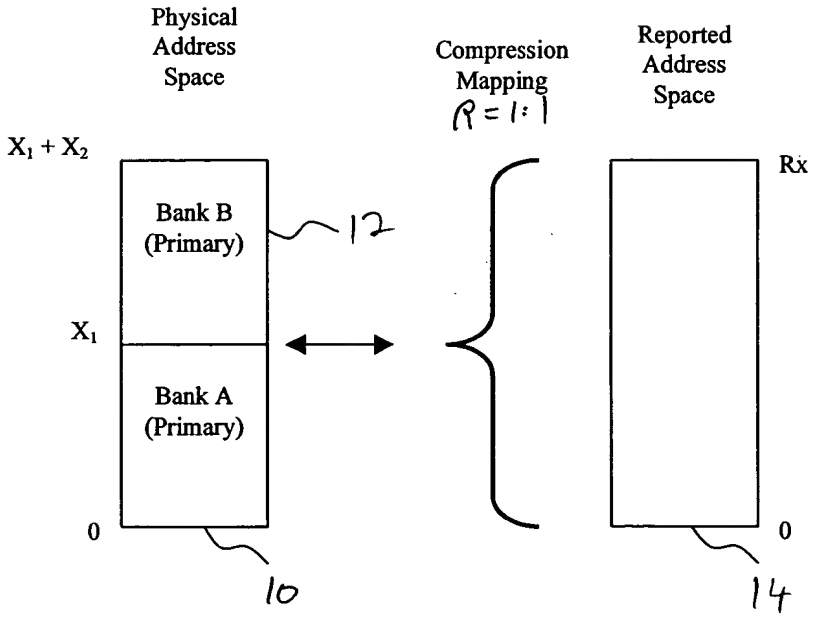
Physical Address Space
Compression Mapping
R = 1:1
Reported Address Space
X1 + X2
Bank B (Primary)
12
X1
Bank A (Primary)
0
10
Rx
0
14

FIG. 1B

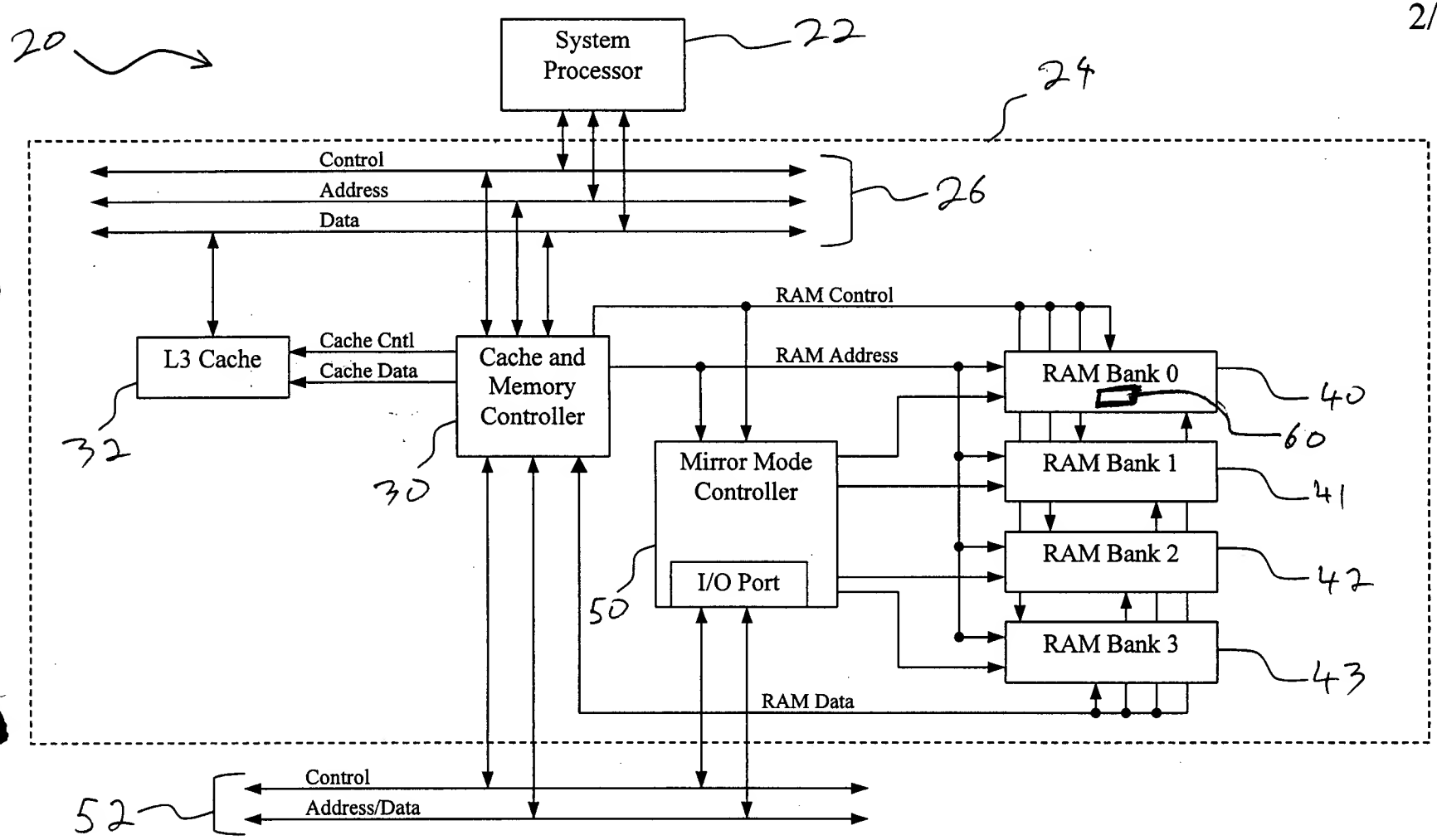
20
System Processor
22
24
Control
Address
Data
26
RAM Control
L3 Cache
Cache Cntl
Cache Data
Cache and Memory Controller
RAM Address
RAM Bank 0
40
60
32
30
Mirror Mode Controller
RAM Bank 1
41
RAM Bank 2
42
I/O Port
50
RAM Bank 3
43
RAM Data
52
Control
Address/Data

FIG. 2

BSEL1	BSEL0	
0	0	Mirror Bank0 on Bank3
0	1	Mirror Bank1 on Bank3
1	0	Mirror Bank2 on Bank3
1	1	Use Bank3 as the high bank of a 4-bank array

FIG. 3

MR	
0	Read from primary bank
1	Read from Bank3 in lieu of primary bank

FIG. 4

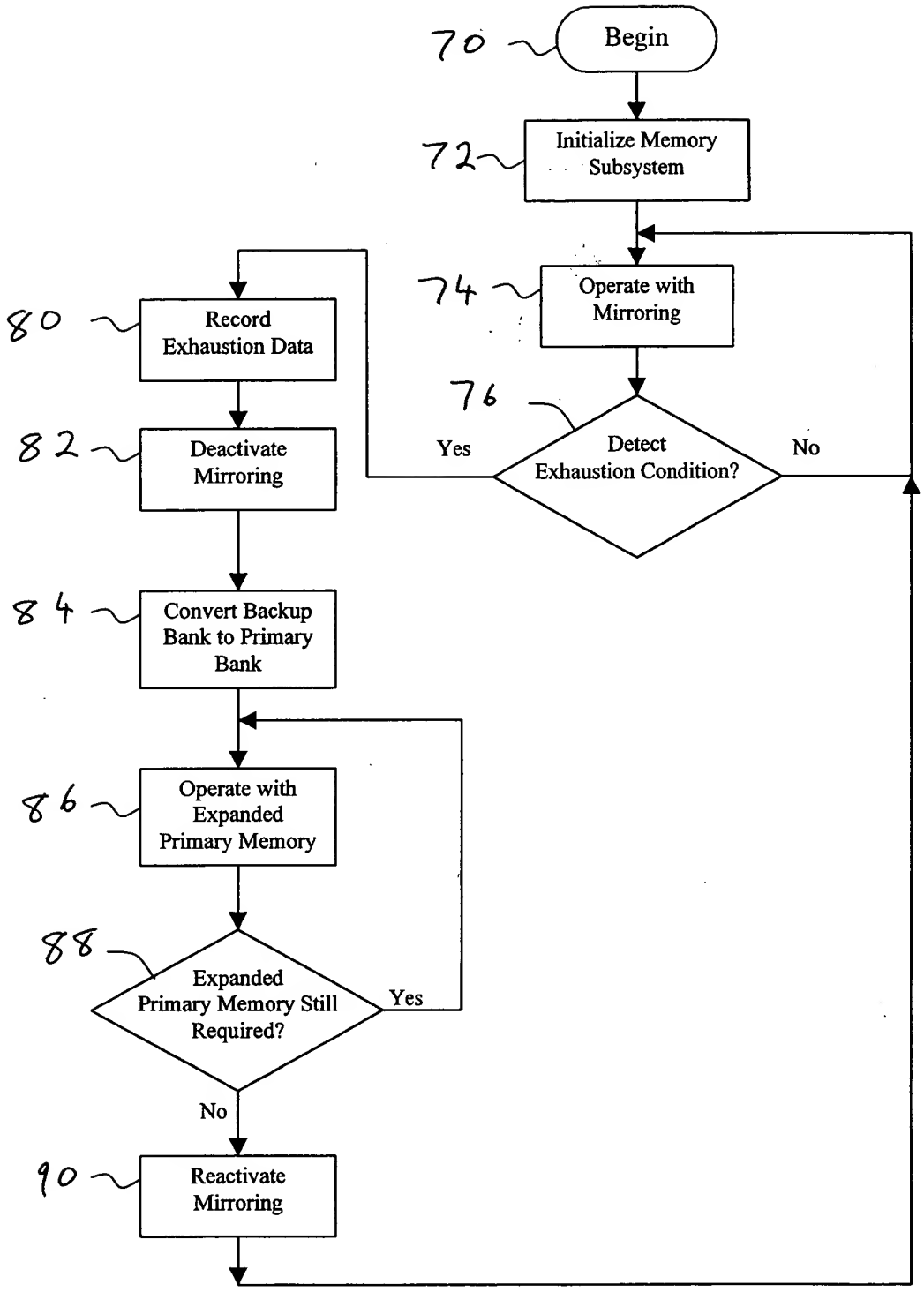
70
Begin
72
Initialize Memory Subsystem
74
Operate with Mirroring
76
Detect Exhaustion Condition?
Yes
No
80
Record Exhaustion Data
82
Deactivate Mirroring
84
Convert Backup Bank to Primary Bank
86
Operate with Expanded Primary Memory
88
Expanded Primary Memory Still Required?
Yes
No
90
Reactivate Mirroring

FIG. 5